Release notes for ENDF/B Development n-056_Ba_134 evaluation

April 26, 2017

- **checkr** Warnings:

  1. A previous error halted parsing of the current section
     MAT=5637, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      261 TO     313
     ```

- **checkr** Errors:

  1. A variable is outside the allowed ENDF range
     MAT=5637, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 1, MT=451
         MOD =    1 OUT OF RANGE    0 -    0          RECORD NUMBER    261
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5637, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY               RECORD NUMBER    315
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5637, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY               RECORD NUMBER    480
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5637, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY               RECORD NUMBER    505
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5637, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY               RECORD NUMBER    530
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5637, MF= 3, MT= 16 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY               RECORD NUMBER    546
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5637, MF= 3, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 17
          SECTION  3/ 17 NOT IN DIRECTORY                RECORD NUMBER    556
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 22
          SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER    562
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 28
          SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER    576
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 51
          SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER    587
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 52
          SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER    603
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 53
          SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER    618
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 54
          SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER    632
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 55
          SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER    645
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5637, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 56
           SECTION  3/ 56 NOT IN DIRECTORY                RECORD NUMBER     658
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 57
           SECTION  3/ 57 NOT IN DIRECTORY                RECORD NUMBER     670
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 58
           SECTION  3/ 58 NOT IN DIRECTORY                RECORD NUMBER     682
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 59
           SECTION  3/ 59 NOT IN DIRECTORY                RECORD NUMBER     693
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 60
           SECTION  3/ 60 NOT IN DIRECTORY                RECORD NUMBER     704
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 61
           SECTION  3/ 61 NOT IN DIRECTORY                RECORD NUMBER     715
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 62
           SECTION  3/ 62 NOT IN DIRECTORY                RECORD NUMBER     725
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 63
           SECTION  3/ 63 NOT IN DIRECTORY                RECORD NUMBER     735
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 3, MT= 91
          SECTION  3/ 91 NOT IN DIRECTORY                   RECORD NUMBER     745
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT=102 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 3, MT=102
          SECTION  3/102 NOT IN DIRECTORY                   RECORD NUMBER     754
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT=103 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 3, MT=103
          SECTION  3/103 NOT IN DIRECTORY                   RECORD NUMBER     775
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT=104 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 3, MT=104
          SECTION  3/104 NOT IN DIRECTORY                   RECORD NUMBER     790
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT=105 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 3, MT=105
          SECTION  3/105 NOT IN DIRECTORY                   RECORD NUMBER     803
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 3, MT=107 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 3, MT=107
          SECTION  3/107 NOT IN DIRECTORY                   RECORD NUMBER     813
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 2 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 4, MT=  2
          SECTION  4/  2 NOT IN DIRECTORY                   RECORD NUMBER     830
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 16
          SECTION  4/ 16 NOT IN DIRECTORY                   RECORD NUMBER    1016
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 17
            SECTION  4/ 17 NOT IN DIRECTORY                  RECORD NUMBER    1027
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 22
            SECTION  4/ 22 NOT IN DIRECTORY                  RECORD NUMBER    1038
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 28
            SECTION  4/ 28 NOT IN DIRECTORY                  RECORD NUMBER    1049
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 51
            SECTION  4/ 51 NOT IN DIRECTORY                  RECORD NUMBER    1060
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 52
            SECTION  4/ 52 NOT IN DIRECTORY                  RECORD NUMBER    1177
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 53
            SECTION  4/ 53 NOT IN DIRECTORY                  RECORD NUMBER    1202
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 54
            SECTION  4/ 54 NOT IN DIRECTORY                  RECORD NUMBER    1227
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 55
            SECTION  4/ 55 NOT IN DIRECTORY                  RECORD NUMBER    1252
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 56 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 56
         SECTION  4/ 56 NOT IN DIRECTORY                RECORD NUMBER     1277
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 57 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 57
         SECTION  4/ 57 NOT IN DIRECTORY                RECORD NUMBER     1302
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 58 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 58
         SECTION  4/ 58 NOT IN DIRECTORY                RECORD NUMBER     1326
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 59 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 59
         SECTION  4/ 59 NOT IN DIRECTORY                RECORD NUMBER     1350
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 60 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 60
         SECTION  4/ 60 NOT IN DIRECTORY                RECORD NUMBER     1374
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 61 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 61
         SECTION  4/ 61 NOT IN DIRECTORY                RECORD NUMBER     1451
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 62 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 62
         SECTION  4/ 62 NOT IN DIRECTORY                RECORD NUMBER     1475
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 63 (0): Directory (b)


```
       ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 63
         SECTION  4/ 63 NOT IN DIRECTORY                RECORD NUMBER     1499
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 4, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 4, MT= 91
        SECTION  4/ 91 NOT IN DIRECTORY                 RECORD NUMBER     1523
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 5, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 5, MT= 16
        SECTION  5/ 16 NOT IN DIRECTORY                 RECORD NUMBER     1548
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 5, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 5, MT= 17
        SECTION  5/ 17 NOT IN DIRECTORY                 RECORD NUMBER     1611
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 5, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 5, MT= 22
        SECTION  5/ 22 NOT IN DIRECTORY                 RECORD NUMBER     1635
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 5, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 5, MT= 28
        SECTION  5/ 28 NOT IN DIRECTORY                 RECORD NUMBER     1865
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5637, MF= 5, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5637, MF= 5, MT= 91
        SECTION  5/ 91 NOT IN DIRECTORY                 RECORD NUMBER     1976
```

- `psyche` Warnings:

    1. Strength function in URR not in agreement with PSYCHE's expectations
       FILE 2 / SECTION 151 / ISOTOPE MASS = 134. L = 0 / STRENGTH FUNCTION IS 1.39812E-04 / STRENGTH FUNCTION 1.39812E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

    ```
    FILE  2
       SECTION 151
           ISOTOPE MASS = 134. L =  0
                     STRENGTH FUNCTION IS  1.39812E-04
                               STRENGTH FUNCTION 1.39812E-04
    ... [1 more lines]
    ```

    2. Strength function in URR not in agreement with PSYCHE's expectations
       FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 8.99992E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
    SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                          STRENGTH FUNCTION 8.99992E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
    ... [2 more lines]
```

3. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 9.00000E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
    SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                          STRENGTH FUNCTION 9.00000E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
    ... [1 more lines]
```

4. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 9.00033E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
    SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                          STRENGTH FUNCTION 9.00033E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

5. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 9.00004E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
    SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                          STRENGTH FUNCTION 9.00004E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
    ... [1 more lines]
```

6. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 9.00013E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
    SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                          STRENGTH FUNCTION 9.00013E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

7. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 8.99991E-05 / LIES OUTSIDE LIMITS

1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                        STRENGTH FUNCTION 8.99991E-05
                                        LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

8. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99992E-05 / STRENGTH FUNCTION 9.00005E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99992E-05
                        STRENGTH FUNCTION 9.00005E-05
                                        LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

9. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 8.99952E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                        STRENGTH FUNCTION 8.99952E-05
                                        LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
... [2 more lines]
```

10. Strength function in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 9.00041E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                        STRENGTH FUNCTION 9.00041E-05
                                        LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

11. Strength function in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 9.00033E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                        STRENGTH FUNCTION 9.00033E-05
                                        LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

12. Strength function in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 8.99966E-05 / LIES OUTSIDE LIMITS

1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                      STRENGTH FUNCTION 8.99966E-05
                                      LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

13. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 9.00009E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                      STRENGTH FUNCTION 9.00009E-05
                                      LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
... [2 more lines]
```

14. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 9.00043E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                      STRENGTH FUNCTION 9.00043E-05
                                      LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

15. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.10000E+04. STRENGTH FUNCTION IS 8.99952E-05 / STRENGTH FUNCTION 9.00028E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
        ENERGY =  1.10000E+04. STRENGTH FUNCTION IS  8.99952E-05
                      STRENGTH FUNCTION 9.00028E-05
                                      LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

- `groupie` Errors:

    1. Very small elastic cross section found
       0: Small elastic

```
Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)
---------------------------------------------------------------------------
ENDF/B Input and Output Data Filenames
ENDFB.IN
ENDFB.OUT
... [97 more lines]
```

- `fudge-4.0` Warnings:

1. Missing a channel with a particular angular momenta combination
   resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

   ```
   WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
   WARNING: Missing a channel with angular momenta combination L = 1, J = 0.5 and S = 1.5 for "capture"
   WARNING: Missing a channel with angular momenta combination L = 1, J = 1.5 and S = 1.5 for "capture"
   WARNING: Missing a channel with angular momenta combination L = 1, J = 2.5 and S = 1.5 for "capture"
   ```

2. Cross section does not match sum of linked reaction cross sections
   crossSectionSum label 0: total (Error # 0): CS Sum.

   ```
   WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.53%
   ```

3. Cross section does not match sum of linked reaction cross sections
   crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

   ```
   WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.13%
   ```

- `fudge-4.0` Errors:

  1. Calculated and tabulated Q values disagree.
     reaction label 15: n[multiplicity:'2'] + Ba133 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -9659762.419174194 eV vs -9.4751e6 eV!
     ```

  2. Calculated and tabulated Q values disagree.
     reaction label 16: n[multiplicity:'3'] + Ba132 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -16849698.31840515 eV vs -1.66672e7 eV!
     ```

  3. Calculated and tabulated Q values disagree.
     reaction label 17: n + H1 + Cs133 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -8359916.810653687 eV vs -8172640. eV!
     ```

  4. Calculated and tabulated Q values disagree.
     reaction label 18: Ba135 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: 6779924.959838867 eV vs 6973390. eV!
     ```

  5. Calculated and tabulated Q values disagree.
     reaction label 19: n + He4 + Xe130 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -1685107.198196411 eV vs -1.5088e6 eV!
     ```

  6. Calculated and tabulated Q values disagree.
     reaction label 20: H1 + Cs134_s (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -1468376.645935059 eV vs -1276540. eV!
     ```

  7. Calculated and tabulated Q values disagree.
     reaction label 21: H2 + Cs133_s (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -6135350.709716797 eV vs -5862520. eV!
     ```

8. Calculated and tabulated Q values disagree.
   reaction label 22: H3 + Cs132_s (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -8864467.882751465 eV vs -8667460. eV!
   ```

9. Calculated and tabulated Q values disagree.
   reaction label 23: He4 + Xe131_s (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: 4919707.920913696 eV vs 5.1072e6 eV!
   ```

- njoy2012 Warnings:

  1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 16
                              only mf4/mf5 provided
     ```

  2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 17
                              only mf4/mf5 provided
     ```

  3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 22
                              only mf4/mf5 provided
     ```

  4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 28
                              only mf4/mf5 provided
     ```

  5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 91
                              only mf4/mf5 provided
     ```

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